

GOOD WORKING PRACTICES HIGH TEMPERATURE INSULATION WOOLS (HTIW)



January 2006

WHAT ARE HIGH TEMPERATURE INSULATION WOOLS?

HTIW include AES wools (Alkaline Earth Silicates), RCF wools (Aluminosilicates) and Polycrystalline wools.

High Temperature Insulation Wools

Alkaline -
Earth - Silicate
- Wools
AES Wools

Aluminium-
silicate-Wool
RCF Wool

Polycrystalline
Wool

High Temperature Insulation Wools are used in applications from 600°C up to 1800 °C.

HTIW brand names you may recognise include:

AES: Insulfrax, Isofrax, Superwool, Calsitra; Sibrat Bio

RCF: Fiberfrax, Cerafiber, Kaowool, Alsitra; Sibrat

Polycrystalline: Saffil, Maftac, Altra, Fibermax

HTIW are USED FOR:

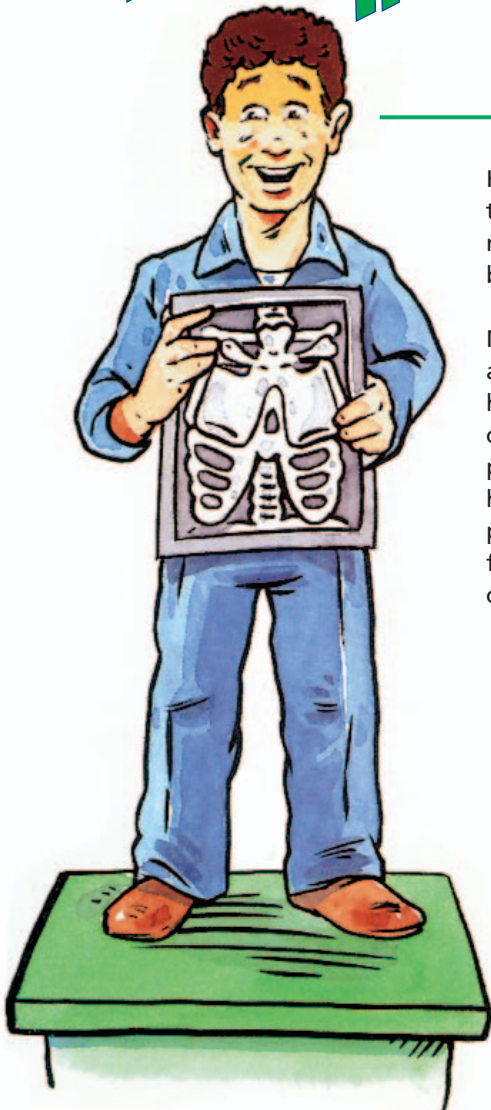
- Thermal insulation in industrial furnaces, kilns, process heaters and boilers.
- Pipe, ductwork and vessel insulation.
- Heat shields in a variety of industries.
- High temperature gaskets, seals and expansion joints.
- Insulation for the aerospace, automotive and appliance industries.
- Fire protection systems and firestops.



In use HTIW:

- Contribute to protecting people and property from excessive heat,
- Reduce greenhouse gas emissions
- Reduce energy usage
- Improve efficiency of furnaces and process equipment

HEALTH & SAFETY INFORMATION



HTIW can cause itching of the skin due to the mechanical effects of coarse fibres. The nose, throat and eyes can also be affected but these effects last only a short time.

Many HTIW products are naturally dusty and can release inhalable fibres during handling so dust levels should be controlled. Some crystalline silica may be produced after high temperature use, however this does not occur with polycrystalline wools. Reducing exposure to fibrous dust will also ensure that any crystalline silica is also controlled.

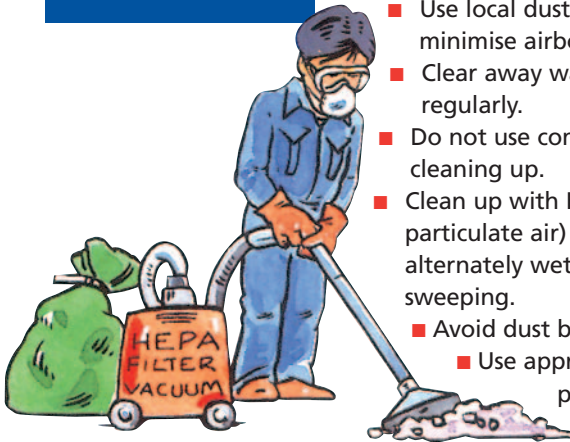
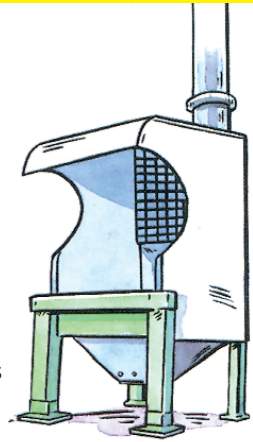
Proper workplace protection measures and good work hygiene practices should be used when working with all HTIW products. When recommended work practices are adhered to, HTIW are safe to manufacture, install and use.

HOW TO WORK SAFELY WITH HTIW

**ALWAYS KEEP
AIRBORNE
DUST TO A
MINIMUM**

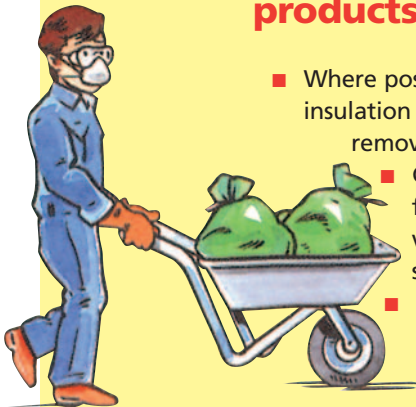
When handling or installing HTIW products:

- Organise your work space to minimise handling and dust generation.
- Use local dust extraction systems to minimise airborne dust.
- Clear away waste offcuts and debris regularly.
- Do not use compressed air for cleaning up.
- Clean up with HEPA (high efficiency particulate air) vacuum cleaner or alternately wet down the area before sweeping.
- Avoid dust becoming air blown.
- Use appropriate personal protection equipment. (See page 5).



When removing used HTIW products:

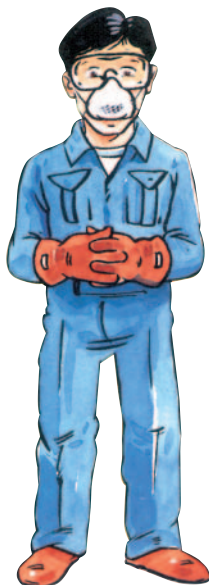
- Where possible dampen the insulation with a water spray before removal.
- Clean the work area frequently with a HEPA vacuum cleaner or wet sweeping.
- Place all waste in plastic bags or closed containers, seal and label.
- Follow proper disposal procedures as listed in the Material Safety Data Sheets (MSDS).



USE YOUR PERSONAL PROTECTION EQUIPMENT



- Wear appropriate work clothing.
- When required use appropriate dust masks.
- Make sure you are trained in the proper use of your dust mask.

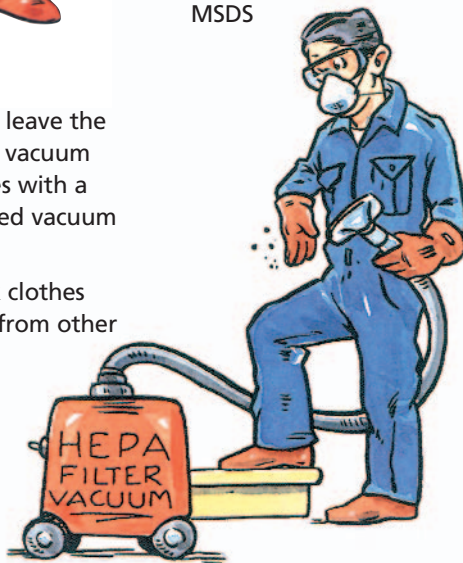


- If you have any doubts consult the supplier's MSDS



- Do not smoke, eat or drink in the work area.

- Before you leave the work place vacuum your clothes with a HEPA filtered vacuum cleaner.
- Wash work clothes separately from other clothing¹.



¹ ECFA recommends that employers arrange for the washing of work clothes. This recommendation is mandatory when working with RCF products.

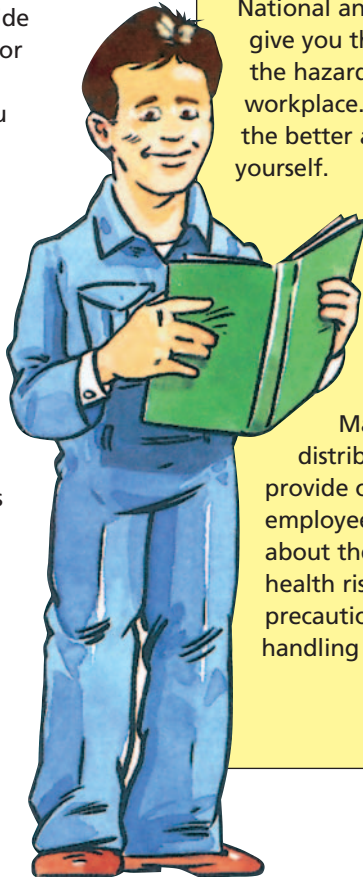
MORE TIPS ON WORKING SAFELY

MAKE SURE YOU GET THE PROPER TRAINING

Your employer should provide health and safety training for you in order to do your job properly. After training, you should be familiar with:

- Possible hazards associated with HTIW products.
- Work practices that can protect you from possible hazards.
- Material Safety Data sheets and warning or caution labels.
- Protective equipment, its use and limitations.

If you have any questions about any of these matters or if you feel you need further training, don't hesitate to ask your employer for help.



LEARN FROM YOUR MATERIAL SAFETY DATA SHEETS (MSDS)

National and international laws give you the right to know about the hazardous substances in your workplace. The more you know, the better able you are to protect yourself.

One of the ways you can learn is by reading the MSDS for all the materials with which you work.

Manufacturers and distributors are required to provide customers and employees with information about their products, associated health risks and any special precautions to be taken when handling them.



EXPOSURE LIMITS FOR HTIW

When working with HTIW products the aim should always be to minimise exposure to airborne fibres. In many European countries there are specific exposure limits in force for HTIW. You should refer to your local or national regulations for further information on the limits applicable. Dust concentrations should be as low as practically possible.

There are also exposure limits for crystalline silica (including quartz and cristobalite). These must be observed when maintaining or removing used RCF and AES wools which have been exposed to temperatures in excess of 900°C. Again please check local and national regulations for further information.



**DO YOU HAVE
ANY QUESTIONS**

We hope you have found this information helpful. If you have any questions, ask your employer to provide further information about HTIW products, industrial hygiene monitoring and safe work practices. If you would like more technical information on respiratory protection and health studies, ask your employer or contact ECFIA or one of the ECFIA member companies.



HOW SAFELY DO YOU WORK?



ECFIA:
Representing
the High
Temperature
Insulation
Wool Industry

When you work with HTIW products, do you use safe work practices?
To find out, answer the following questions:

	YES	NO
I wear goggles or safety glasses with side shields when conditions require it.	<input type="checkbox"/>	<input type="checkbox"/>
I wear a dust mask when conditions require it.	<input type="checkbox"/>	<input type="checkbox"/>
I perform a fit test for my dust mask every time I wear it.	<input type="checkbox"/>	<input type="checkbox"/>
I wear appropriate work clothing.	<input type="checkbox"/>	<input type="checkbox"/>
I wear protective gloves when conditions require it.	<input type="checkbox"/>	<input type="checkbox"/>
I vacuum my work clothes before removing them.	<input type="checkbox"/>	<input type="checkbox"/>
I never shake my work clothes	<input type="checkbox"/>	<input type="checkbox"/>
My work clothes are washed separately from other clothes	<input type="checkbox"/>	<input type="checkbox"/>
A copy of the MSDS is available to me.	<input type="checkbox"/>	<input type="checkbox"/>
If I get dust on my skin, I wash with warm water.	<input type="checkbox"/>	<input type="checkbox"/>
I have read the product warning or caution labels.	<input type="checkbox"/>	<input type="checkbox"/>
I know how to get more information on HTIW.	<input type="checkbox"/>	<input type="checkbox"/>

If you answer "no" to any of these questions, speak to your supervisor/employer.

ECFIA

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